



The cure-in-place ablator is delivered into the repair cavity by means of a pneumatically controlled hand-held applicator, or “goo-gun”.

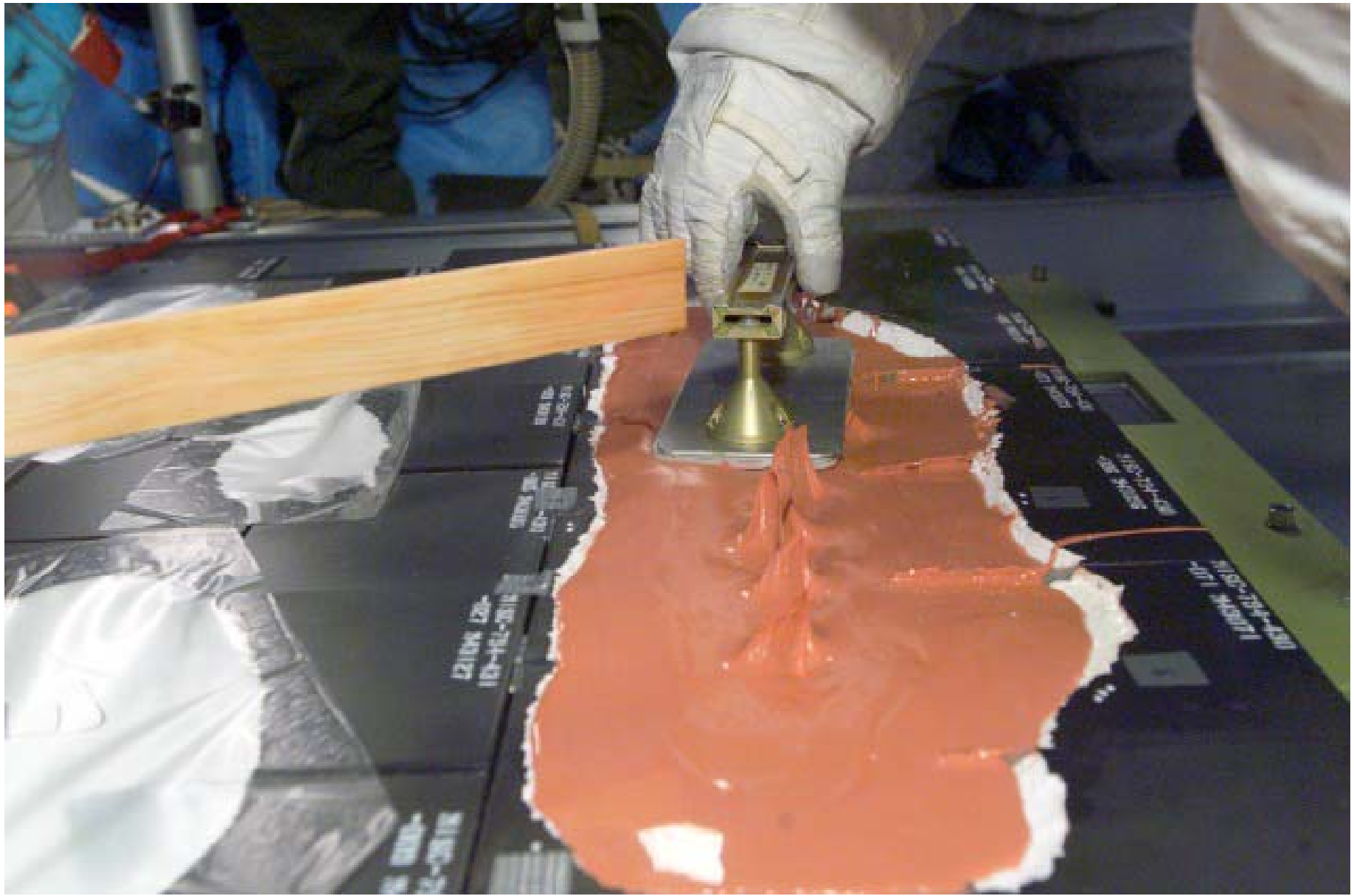


After injecting the cure-in-place ablator into the damaged tile, the surface of the repair must be smoothed using special foam covered tools.





One method of manipulating the repair surface is to use small foam covered rollers to flatten protuberances in the material.



A foam covered “stamp” or flat trowel is used in large damage cavities to flatten peaks and high spots on the surface of the repair.





Astronaut Scott Parazynski injects the cure-in-place ablator into the cavity and uses a smaller, angled tool to flatten the repair surface.



Astronaut David Wolf uses a large adjustable foam covered roller to smooth the surface of a membrane covered cavity.



Wide Lexan trowels can also be used to smooth the surface of a membrane covered repair without getting ablator on the tools or suit.





The repair must be checked using a “step gage” to insure that it does not protrude more than 0.25 inches past the orbiter outer mold line (OML).

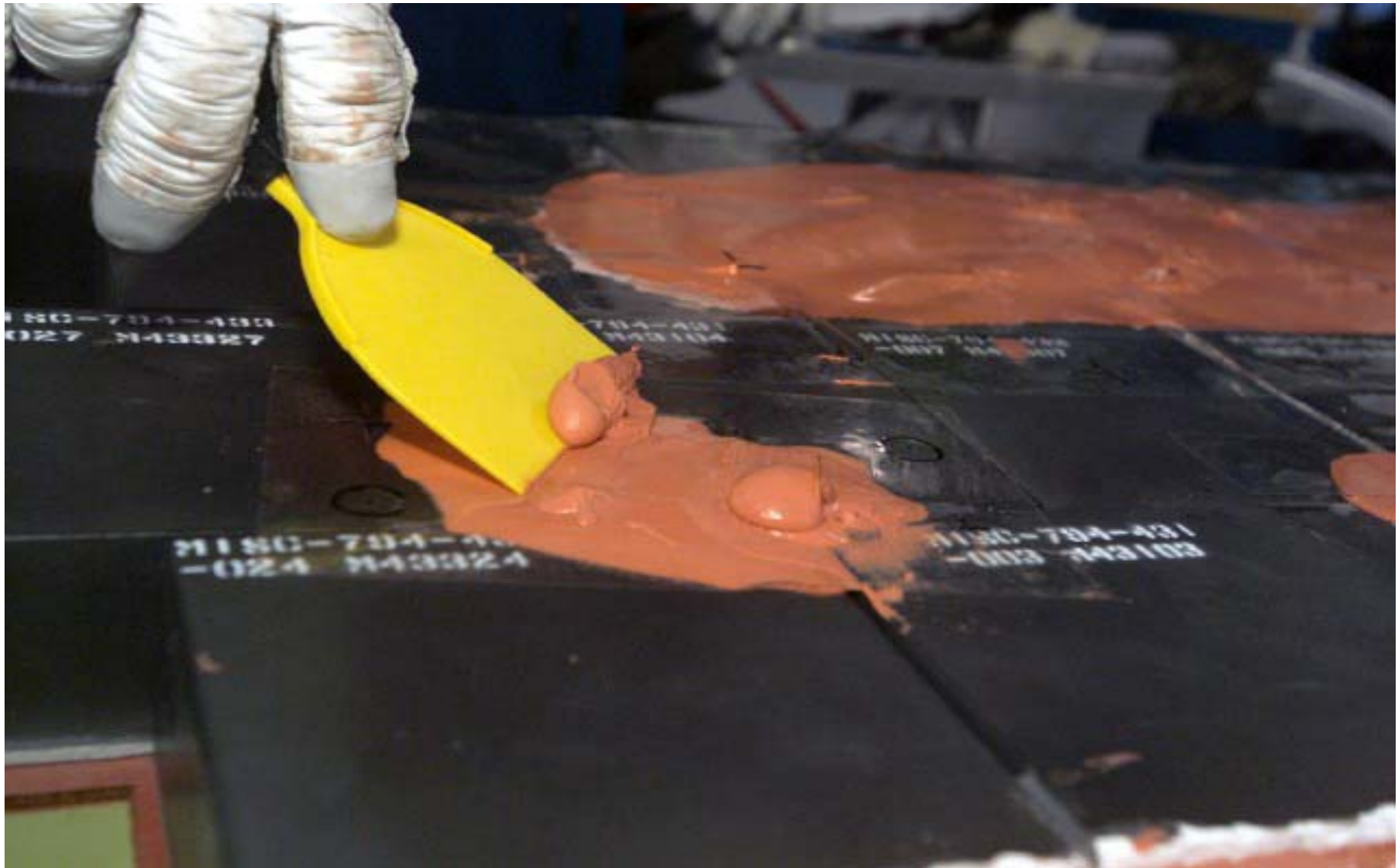




In instances where a slight overfill if the cavity may be called for, a special foam covered trowel is used to verify that the ablator is just above the OML



It may be necessary to remove excess material from a membrane covered cavity. This can be done using a large flat trowel.



It is important to insure that there are no protuberances on the repair surface that may disrupt the aerodynamic flow over the cavity. This excess material may be removed using a tool similar to a putty knife.





Astronaut Carlos Noriega injects material to a special clear damage mold to observe flow characteristics of the material in zero-gravity.